

Attorney Docket No.: MCP-0141
Inventors: Halpern and England
Serial No.: 09/744,406
Filing Date: January 22, 2001
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This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of the claims:

Claim 1 (currently amended): A cellular immunogen for immunizing a host against the effects of the product of a target proto-oncogene, the overexpression of which target proto-oncogene is associated with a cancer, ~~which said~~ cellular immunogen ~~comprises allogeneic donor comprising~~ cells which ~~have are~~ allogeneic with respect to the host, said allogeneic cells having been transfected with at least one transgene construct vector comprising at least one non-transforming transgene cognate to the target proto-oncogene, said non-transforming cognate transgene derived by deletion of a sequence of the transgene essential for transformation and consisting of wild-type sequence outside the deleted sequence, and a strong promoter to drive the expression of the cognate transgene in the transfected cells, wherein the non-tranforming cognate transgene ~~is non-transforming and~~ encodes a gene product which induces host immunoreactivity to host self-determinants of the product of the target proto-oncogene gene.

Claim 2: (canceled)

Claim 3 (currently amended): A The cellular immunogen for ~~immunizing a host against the effects of the product of a target~~

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~~proto-oncogene, the overexpression of which target proto-oncogene is associated with a cancer, which cellular immunogen comprises allogeneic donor cells which have been transfected with at least one transgene construct comprising at least one transgene cognate to the target proto-oncogene and a strong promoter to drive the expression of the transgene in the transfected cells, the transgene encoding a gene product which induces host immunoreactivity to host self-determinants of the product of the target proto-oncogene gene, and according to claim 1 wherein the allogeneic transfected cells are non-dividing.~~

Claims 4-6 (canceled):

Claim 7 (currently amended): ~~A~~ The cellular immunogen according to ~~claim 6~~ claim 1 wherein the ~~donor~~ allogeneic cells have been transfected with a plurality of ~~transgene constructs~~ vectors, each ~~construct~~ vector encoding a different ~~deletion~~ mutation non-transforming cognate transgene.

Claim 8 (currently amended): ~~An~~ The cellular immunogen according to claim 1 wherein the ~~donor cells have been~~ transfected with a non-transforming cognate transgene is cognate to a target proto-oncogene selected from the group of proto-oncogenes consisting of AKT-2, c-erbB-2, MDM-2, c-myc, c-myb, c-

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ras, c-src and c-yes.

Claim 9 (currently amended): ~~An~~ The cellular immunogen according to claim 1 wherein the donor allogeneic cells comprise fibroblasts or bone marrow-derived antigen-presenting cells.

Claim 10 (currently amended): A method for preparing a cellular immunogen for immunizing a host against the effects of the product of a target proto-oncogene, the overexpression of which target proto-oncogene is associated with a cancer, the method comprising:

transfecting ~~allogeneic donor~~ cells which are allogeneic with respect to the host with at least one ~~transgene construct~~ vector comprising at least one non-transforming transgene cognate to the target proto-oncogene, said non-transforming cognate transgene derived by deletion of a sequence of the transgene essential for transformation and consisting of wild-type sequence outside the deleted sequence, and a strong promoter to drive the expression of the non-transforming cognate transgene in the transfected cells, wherein the non-transforming cognate transgene ~~is non-transforming and~~ encodes a gene product which induces host immunoreactivity to host self-determinants of the product of the target proto-oncogene gene.

Claim 11: (canceled)

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Claim 12 (currently amended): ~~A method for preparing a cellular immunogen for immunizing a host against the effects of the product of a target proto-oncogene, the overexpression of which target proto-oncogene is associated with a cancer, the method comprising:~~
~~transfecting allogeneic donor cells with at least one transgene construct comprising at least one transgene cognate to the target proto-oncogene and a strong promoter to drive the expression of the transgene in the transfected cells, the transgene encoding a gene product which induces host immunoreactivity to host self-determinants of the product of the target proto-oncogene gene, The method of claim 10 wherein the transfected allogeneic cells are non-dividing.~~

Claims 13-15: (canceled)

Claim 16 (currently amended): ~~A~~ The method according to ~~claim 15~~ claim 10 wherein the donor allogeneic cells are transfected with a plurality of transgene constructs vectors, each construct vector encoding a different ~~deletion mutation~~ non-transforming cognate transgene.

Claim 17 (currently amended): ~~A~~ The method according to claim 10 wherein the non-transforming cognate transgene is cognate to a target proto-oncogene selected from the group of

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proto-oncogenes consisting of AKT-2, c-erbB-2, MDM-2, c-myc, c-myb, c-ras, c-src and c-yes.

Claim 18 (currently amended): A The method according to claim 10, wherein the donor allogeneic cells comprise fibroblasts or bone marrow-derived antigen-presenting cells.

Claims 19-33 (canceled)

Claim 34 (currently amended): A The cellular immunogen according to claim 9 wherein the bone marrow-derived antigen-presenting cells are selected from the group consisting of macrophages, dendritic cells, and Langerhans cells.

Claim 35 (currently amended): A The method according to claim 18 wherein the bone marrow-derived antigen-presenting cells are selected from the group consisting of macrophages, dendritic cells, and Langerhans cells.

Claim 36-38 (canceled)

Claim 39: (new) A method for inducing an immune response that targets tumor cells by recognition of proto-oncogene-specific antigenicity in a host comprising transplanting into the host the cellular immunogen of claim 1.